GeoDesy FSO

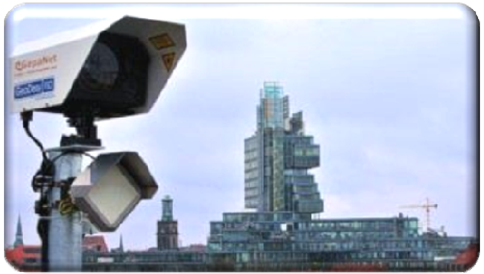
PRODUCT PRESENTATION

GeoDesy FSO

Presenter: Gary Harrington
Krisztian Groger

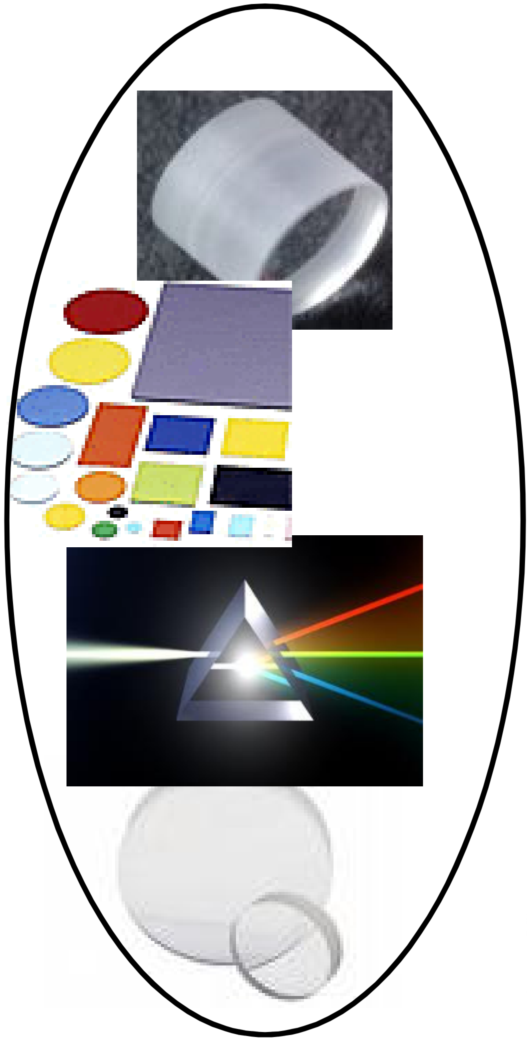
Geodesy LTD is the leading manufacturers of optics, precise mechanics, survey device parts and laser free space optical communications devices.

The over 100 years of tradition of quality manufacturing is combined with the latest technology, and superior know-how This stable manufacturing practice is the underlying factor of the GeoDesy FSO manufacturing.



Geodesy Group main products

MOM BUDAPEST GeoDesy



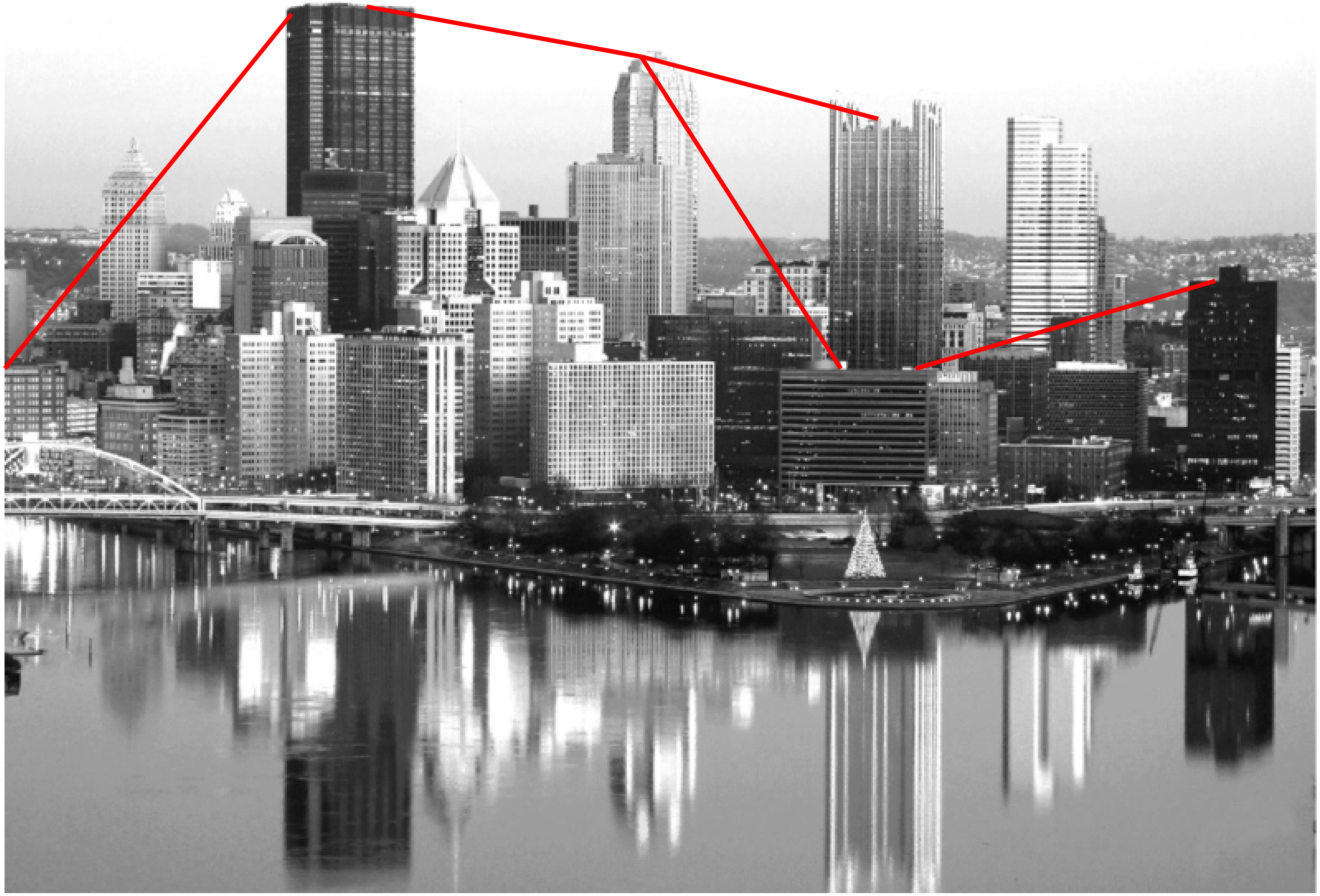
MOM BUDAPEST PrecOptik

GeoDesy FSO

About the presentation

- Technology overview
- Products Comparisons
- Typical Applications
- Products
- Roadmap

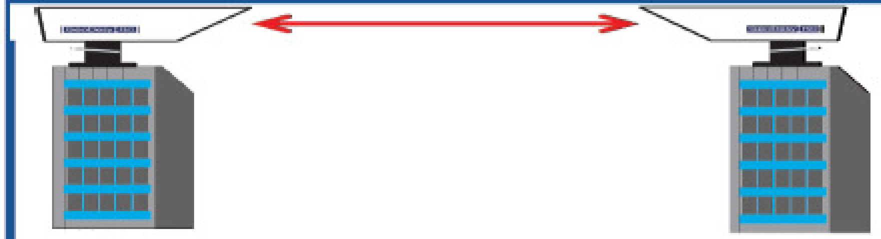
Lasers in Free Space?



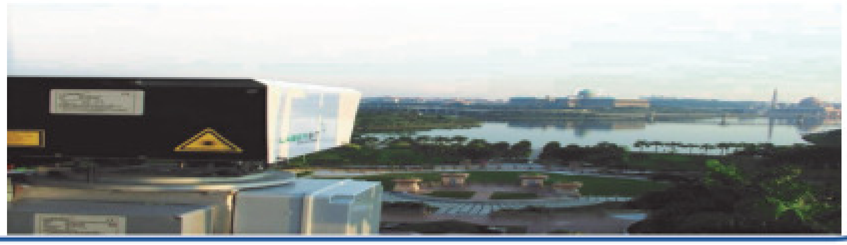
What Is Free Space Optics (FSO)

- Line of sight free space (wireless) transmission technology
- Utilizes light (laser) to transfer data
- Delivers high speed secure connection and NO Delay
- Offers economical solution at high Bandwidth (low power consumption, no wide radiation)
- Distances – up to 5Km.
- No License is required.

Operation Principles



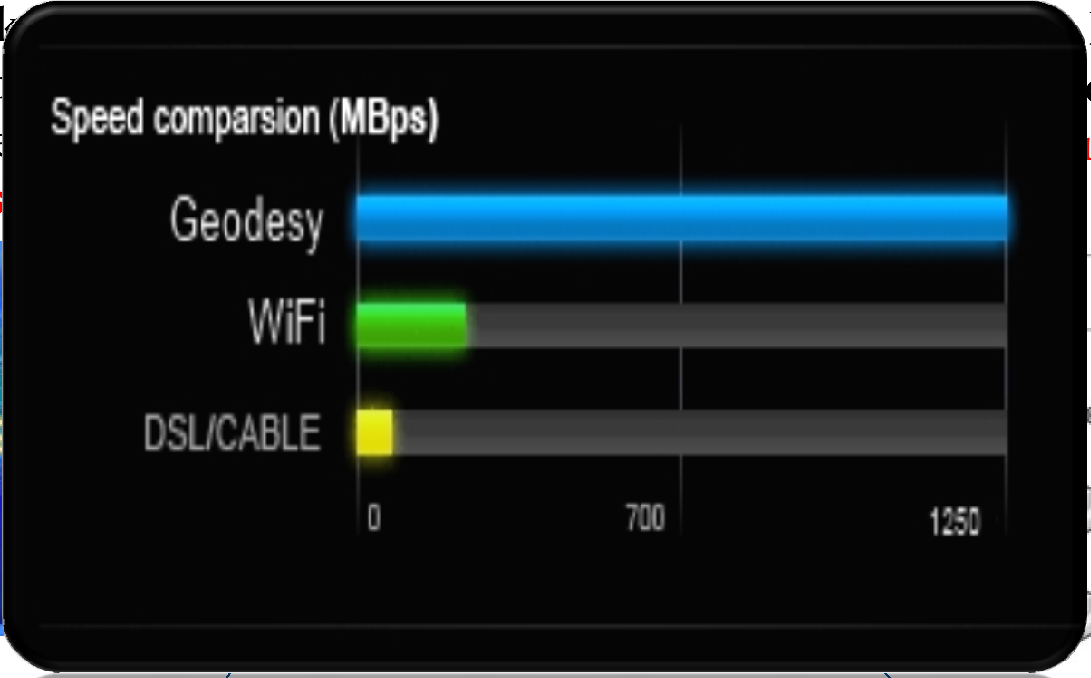
Free Space Optics (FSO) is an optical communication technology that uses light propagating in free space to transmit data between two points.



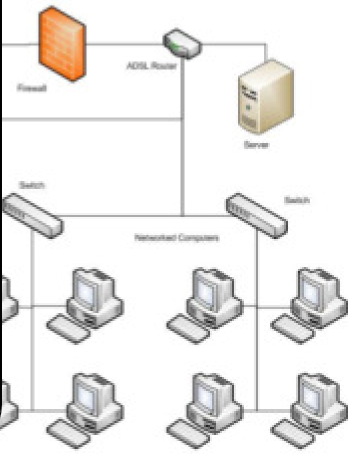
Unlike any other means of communication Free Space Optics are perfectly suitable for over water communication. No interference issues no cross talks. Undetectable this way the safest communication method.

The Last mile Bottle Neck Problem

Wide Area Network
major cities are ext
Fiber base
>2.5Gbps

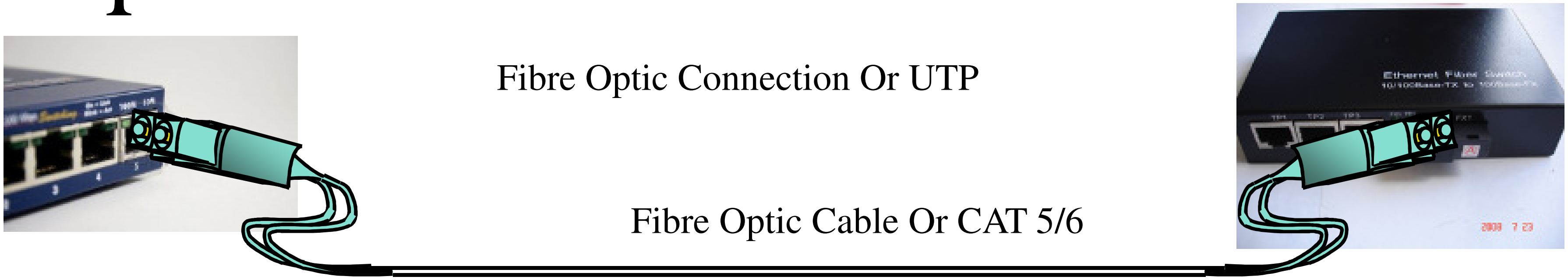


Networks in
e getting faster
ı Gbps



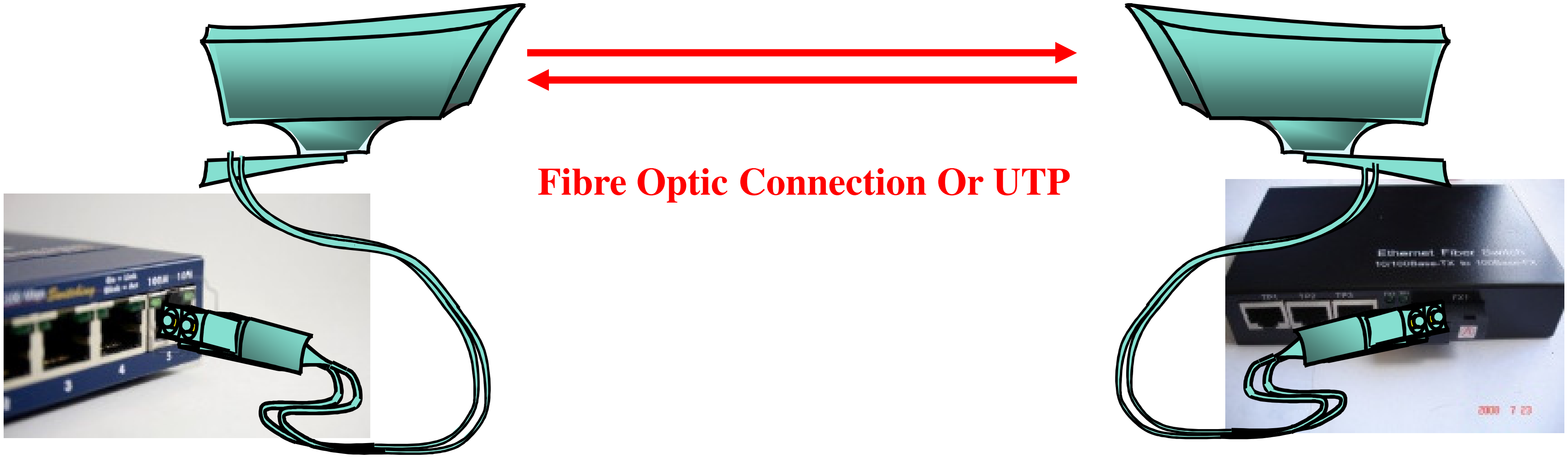
Only about 10% of commercial buildings are lit with fiber connections

Optical Transmission



Fibre Optic Connection Or UTP

Fibre Optic Cable Or CAT 5/6



Laser Head

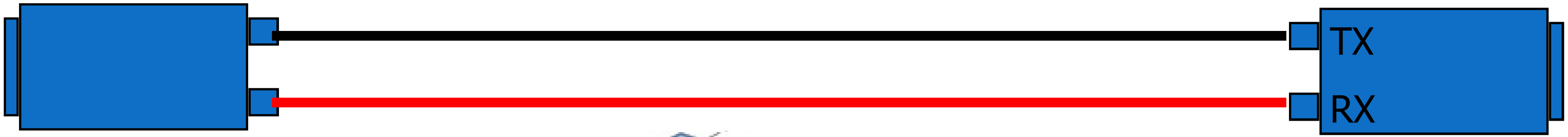
Free Space Transmission

Laser Head

Fibre Optic Connection Or UTP

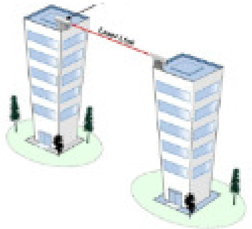
Optical Transmission

Standard Fiber Optic link



FO transceiver

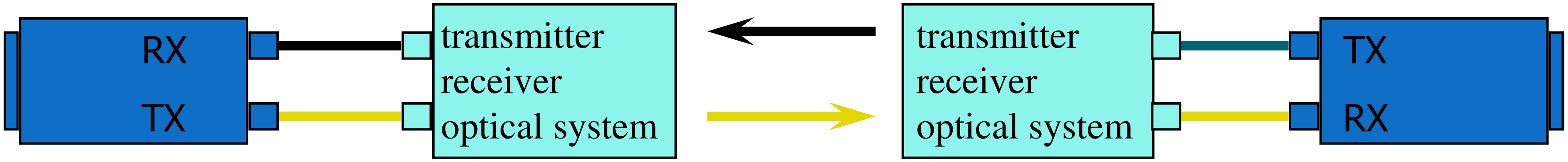
FO tansciever



----Infrared / Laser Link----

Infrared head

Infrared head



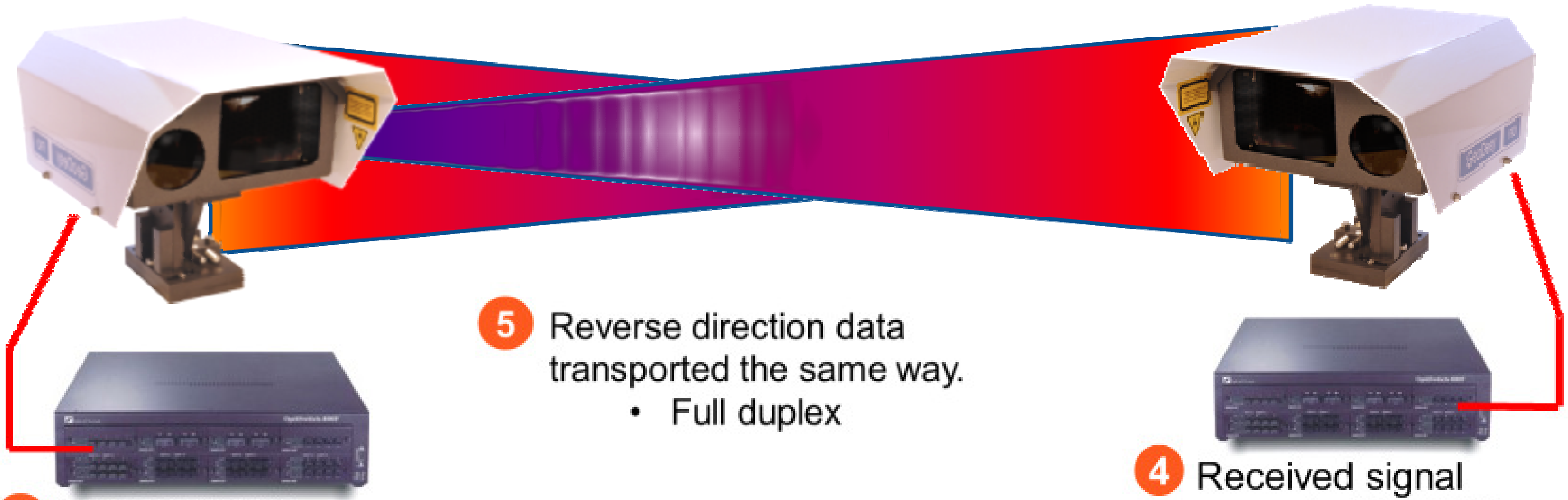
transmitter
receiver
optical system

transmitter
receiver
optical system

FO transceiver

FO transceiver

How It Works



① Network traffic converted into pulses of invisible light representing 1's and 0's

② Transmitter projects the carefully aimed light pulses into the air

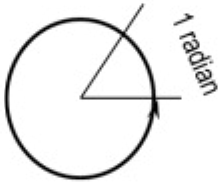
③ A receiver at the other end of the link collects the light using lenses and/or mirrors

④ Received signal converted back into fiber or copper and connected to the network

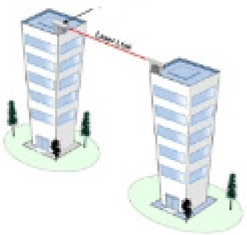
⑤ Reverse direction data transported the same way.
- Full duplex

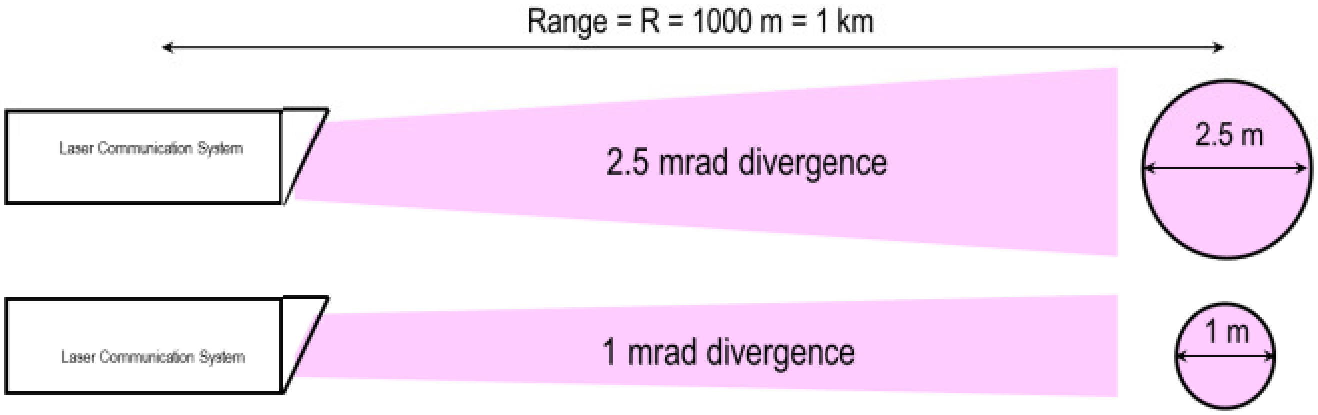
Anything that can be transmitted Via Fibre can be transmitted Via Geodesy-FSO

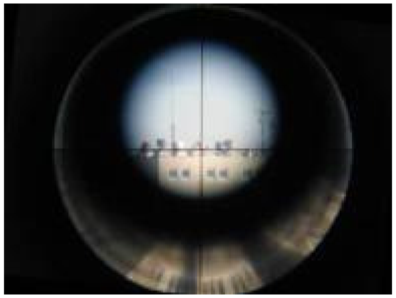
Beam Divergence –measure of angle or beam spread.

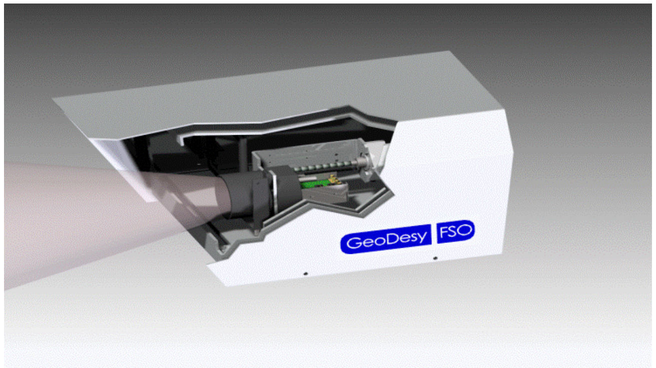


circle: 360° (degrees) = 2π radians
1 radian = 57° (degrees)
1 milliradian = 0.001 rad = 0.057° (degree)
80 μ radians = 0.00008 rad = 0.0046° (degree) (satellite)

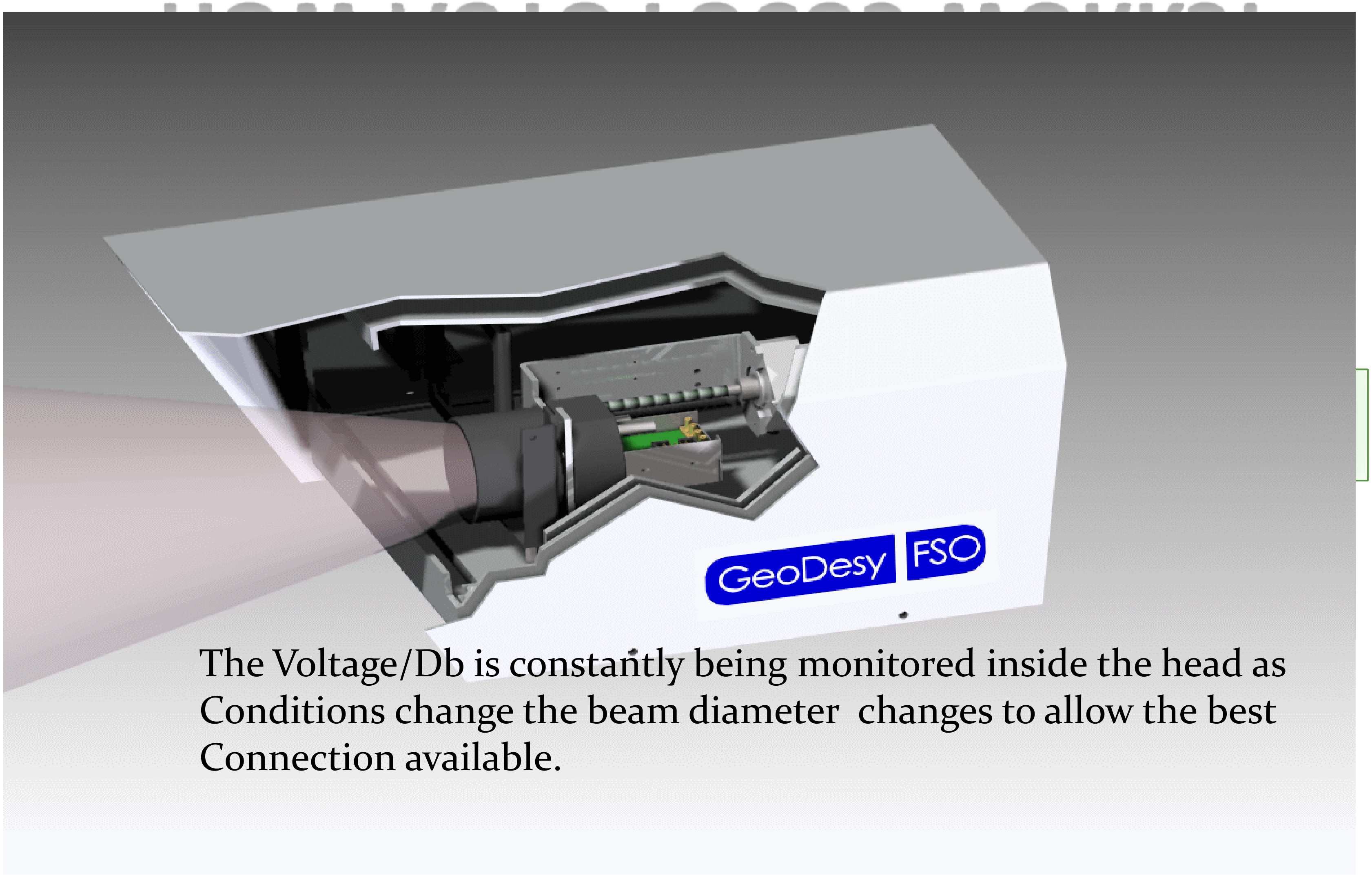



Range = R = 1000 m = 1 km
Laser Communication System
2.5 mrad divergence
2.5 m
Laser Communication System
1 mrad divergence
1 m





HOW AUTO FOCUS WORKS?

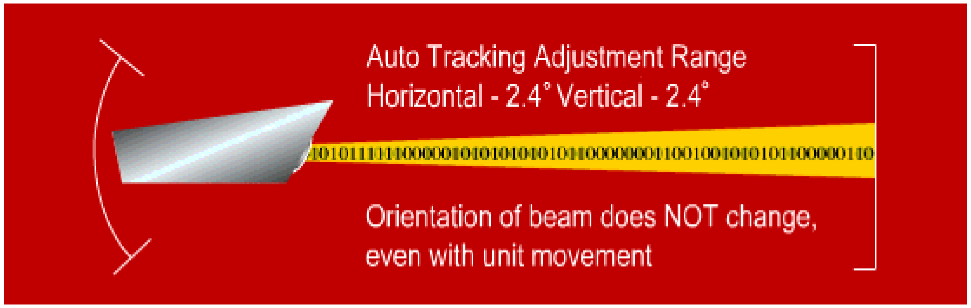


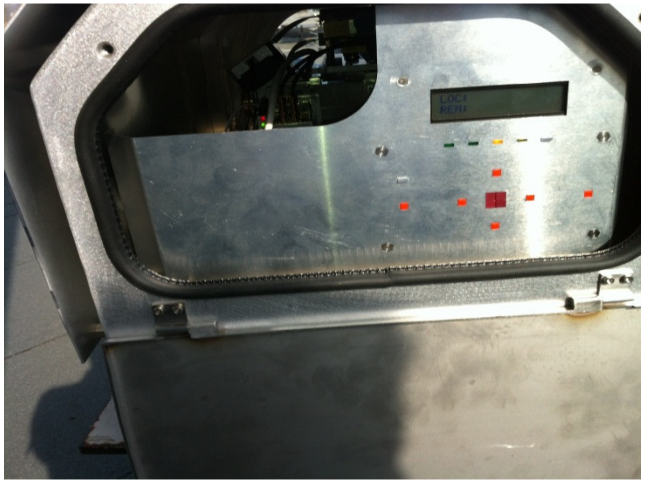
The Voltage/Db is constantly being monitored inside the head as Conditions change the beam diameter changes to allow the best Connection available.

ALL NEW AUTO TRACKING.

Geodesy FSO - Among the most notable advances featured in the AT Series is Auto Tracking, This Geodesy-engineered and developed feature maintains transmission during normal building sway and movement, automatically compensating for shifting of buildings and platforms due to vibration, wind, temperature changes and other environmental conditions. Incorporating technology from Geodesy's Indepth experience developing precision optical systems for the telecommunications market, Geodesy Auto Tracking is the most advanced available today.

The narrow beam achieved with the Auto Tracking feature is much more power efficient (25X more) in comparison with a FSO unit without Auto Tracking.


Auto Tracking Adjustment Range
Horizontal - 2.4° Vertical - 2.4°
Orientation of beam does NOT change,
even with unit movement



Compliances

Declaration of conformity

SGS-TÜV

CERTIFICATE
OF COMPLIANCE

Product Certification

CERTIFICATE

TÜV

The Certification Body
of TÜV Management Service GmbH

EMC Performance / Safety Standards

CE Conformity Certification

Council Directive 89/336 EEC

- EN55022:1998, Class 3b, CISPR 22:1993
- EN55024:1998
- EN50082-2:1995
- EN61000-4-2/3/4/5/6/11
- ENV50204

SGS-TuV Compliance Certification

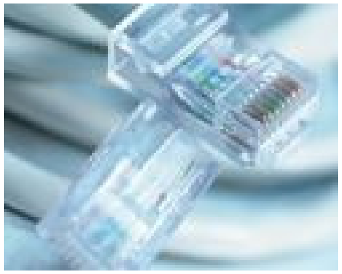
LVD Directive 73/23/EEC amended 93/68/EEC

- EN60825-1:94 + A11:96
- EN60950-1:92 + A1:93 + A2:93 + A3:95 + A4:97

ISO 9001 - 2000

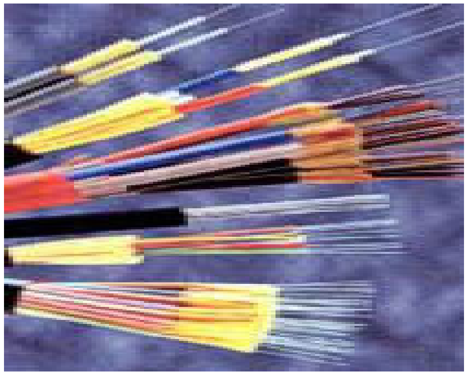
Technology Comparison

- Cable
- Radio
- Infrared / Laser



Alternative To Cable / Fibre

- Cost of installation
- Speed of installation
- Flexibility
- Investment protection



Alternative To Unlicensed Radio

- Bandwidth Limitations
- Reliability
- Security 128 Bit
- Network knowledge required
- Signal Saturation

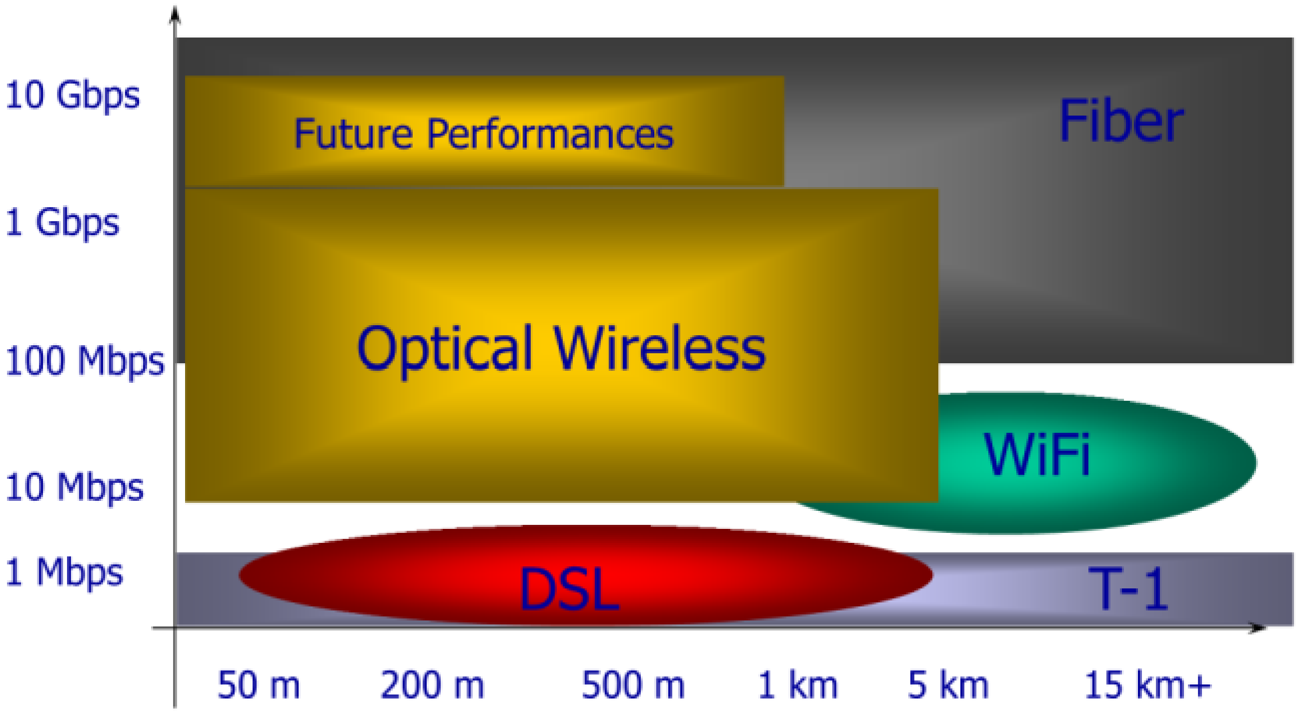
Alternative To Leased Radios

- Bandwidth
- Cost of ownership
- Cost of installation
- Speed of installation
- Flexibility
- Investment protection
- No License required

Why Free Space Optics Positioning ?

- License-free operation
- High bandwidth From 2Mbps Up To 1Gbps
- High data security
- No interference issues
- Rapid deployment/re-deployment

Technology Comparison



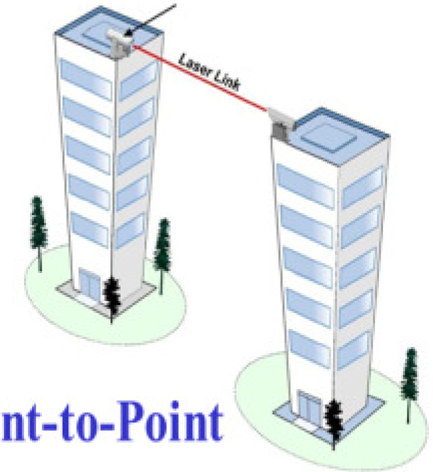
Worldwide Installations

(Over 10000 Installs Worldwide)

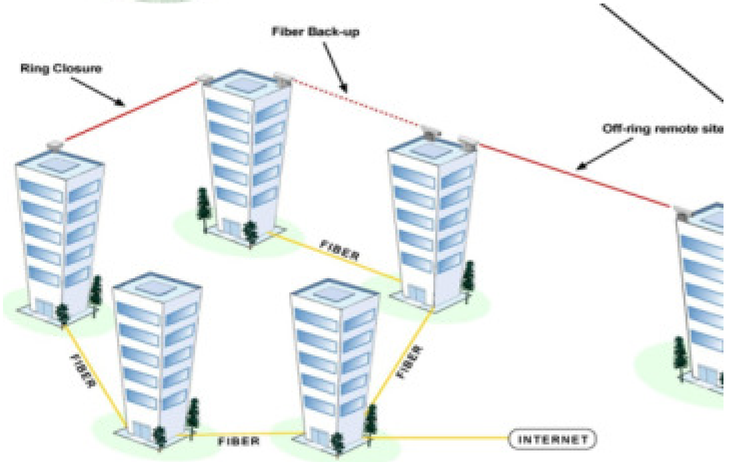
GeoDesy FSO

Typical Applications

Typical Applications

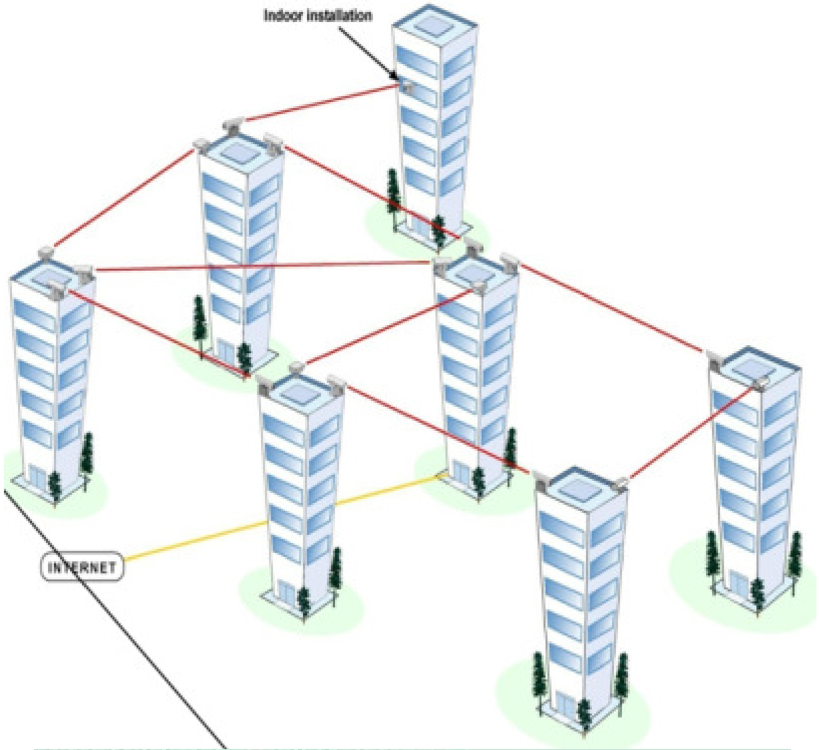


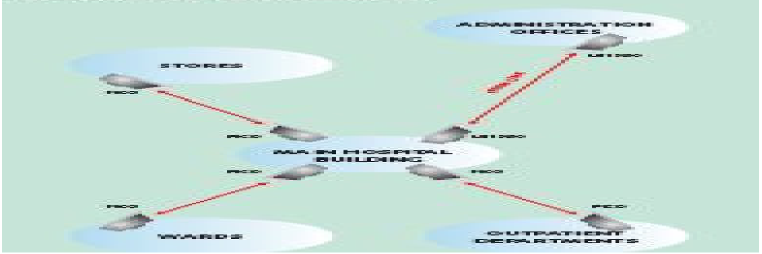
Point-to-Point



Ring

Secure Ultra Bandwidth Wireless Mesh





GeoDesy FSO

Rural Access / Extensions

- Across Obstacles
- Rugged terrain, rivers, railways, highways, etc.
- No cable alternatives.
- Fast Deployment
- High Bandwidth

Temporary Installations

Simple Infrastructure
Fast Deployment
Re-deployable
Small, Light-weight
Low Power Consumption
Solar or Wind power

Application Examples

- Construction Sites
- Emergency Service Restoration
- Civil Defense
- Special Media Events

Hazardous Areas

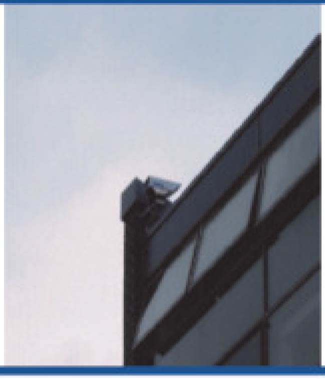
Low Power Transmission
No RF Radiation
Less than 50W
(low heat radiation)

Application Examples

Oil Rigs
Fuel Storage Depots
Ammunition Stores

Critical Link Back UP / Support Disaster Recovery

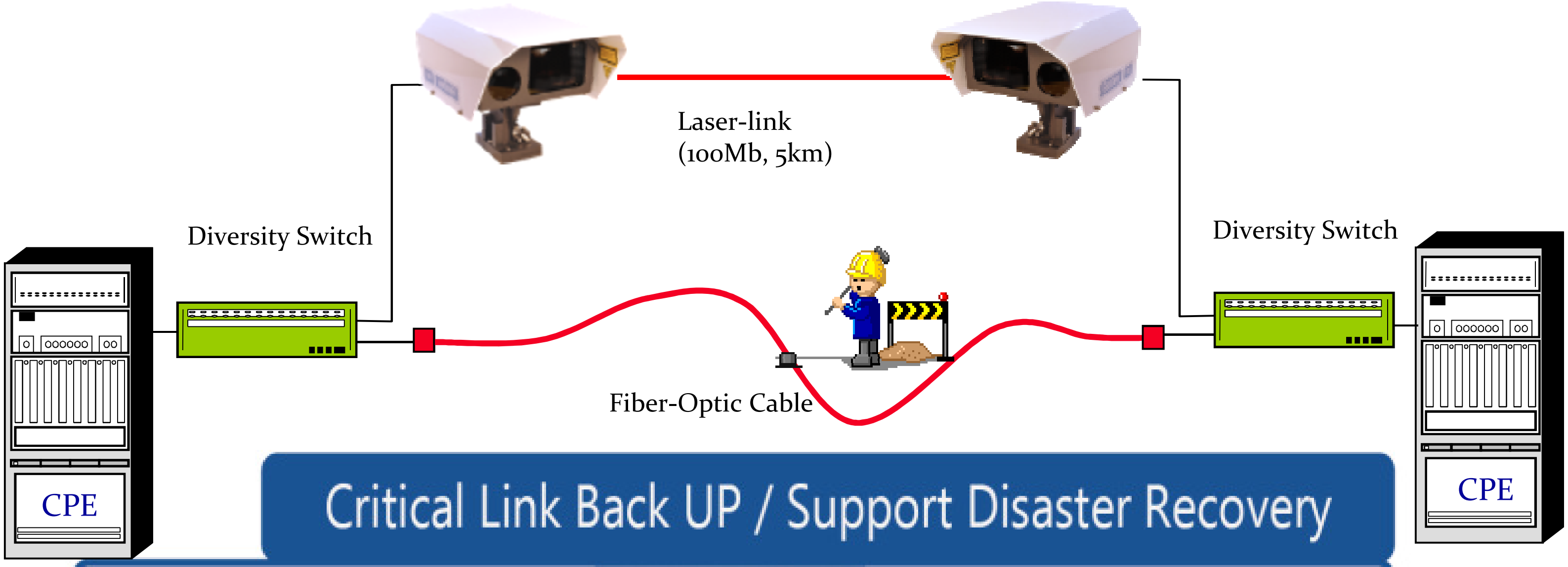
Alternate Media / Route
Wire-line Speed / Bandwidth
High Capacity Link
Low Latency



Application Examples

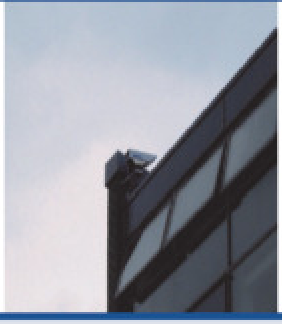
Banks
Internet Data Centres
Press Offices
Government Offices

Critical Link Back UP / Support Disaster Recovery



Critical Link Back UP / Support Disaster Recovery

Alternate Media / Route
Wire-line Speed / Bandwidth
High Capacity Link
Low Latency



Application Examples

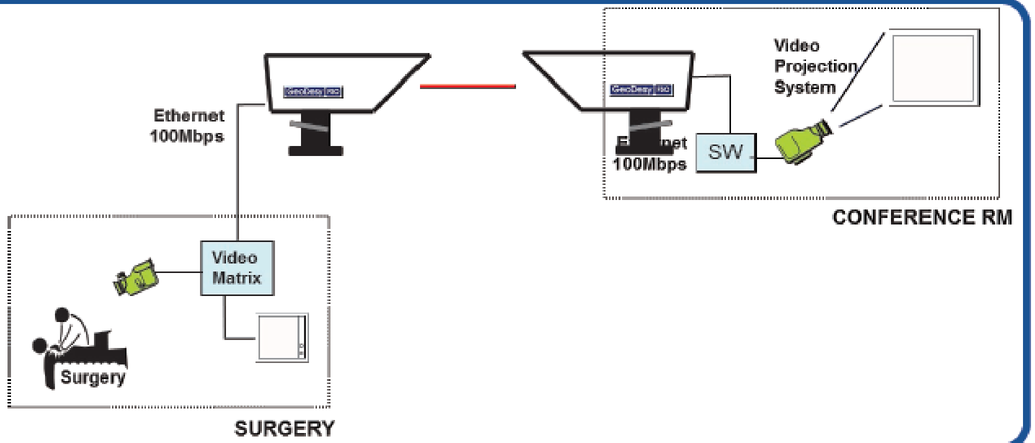
Banks
Internet Data Centres
Press Offices
Government Offices

Field / HQ Communications

Unaffected by RFI (hostile / own)
No RF Signature (LPI, LPD)
Cannot be Monitored / Secure
Physically Inconspicuous
Rapid Set-up / Tear-down
High Band Width

Video Monitoring

- ICL, Kenya
- DFC, Uganda
- Adtech Inc, HI, USA
- Hungarian National Museum
- Sigma Wireless, Ireland



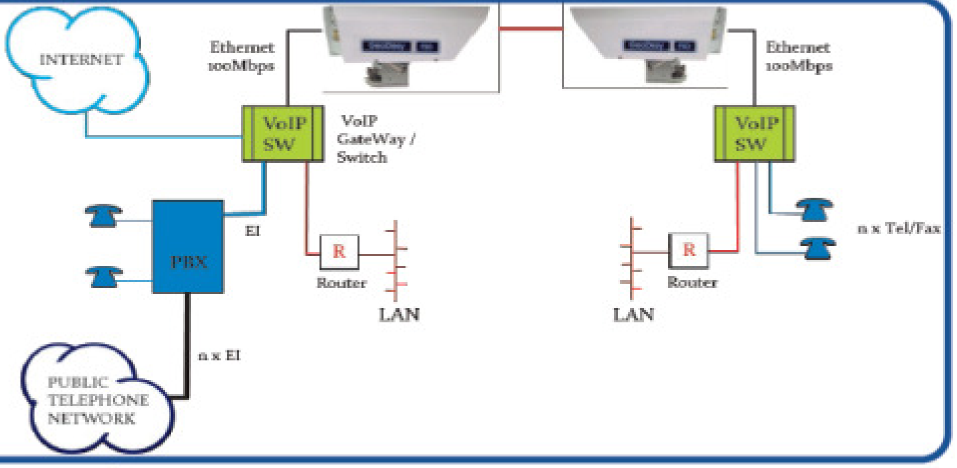
Voice And Data (IP)

CLEC, ISP, IDC

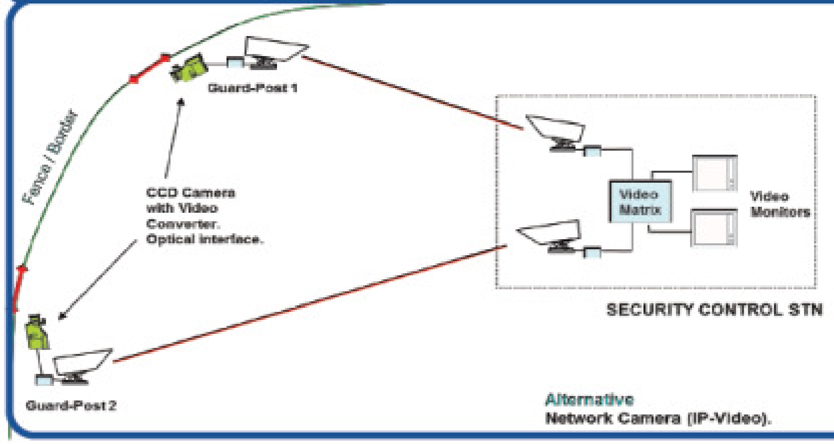
Campus, Corporate Networks

Industrial, Science Parks

Residential Condominiums



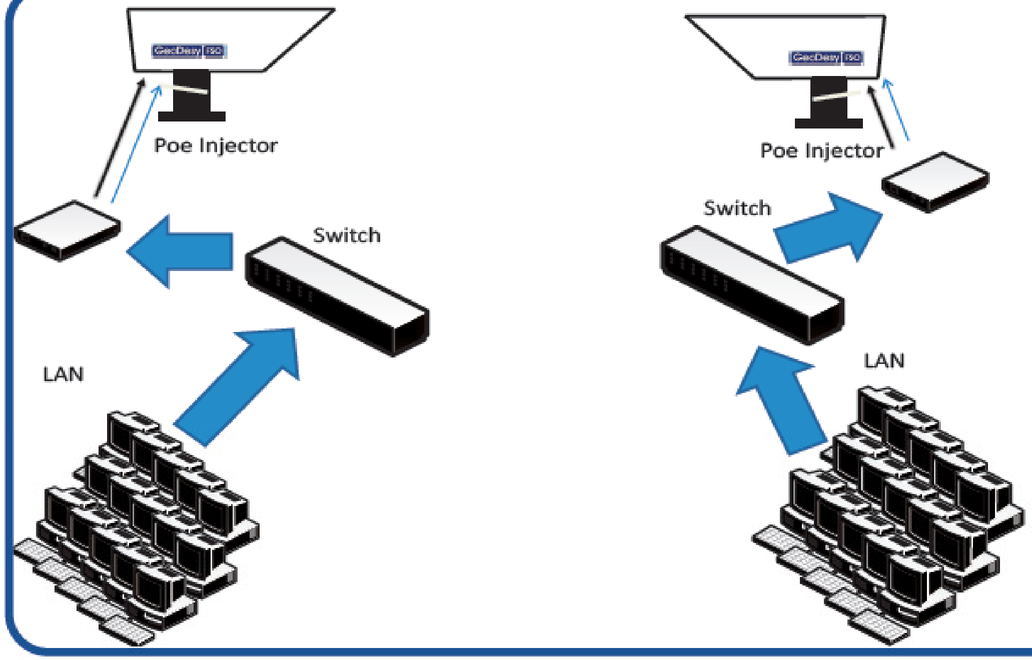
Video Surveillance



Alternative
Network Camera (IP-Video).

- Sky Television - UK
- Int Airport, Budapest
- Stanstead Airport, UK
- South Bank Univesity - UK
- Irish Parliament – Ireland

Data Networking

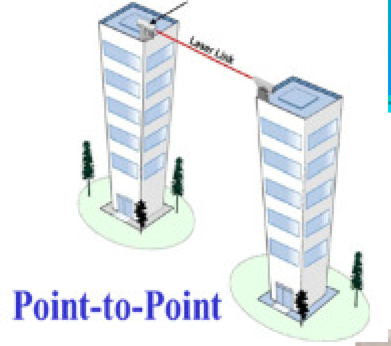


- NewCom Telco - Guatamala
- Budapest Stock Exchange
- Grupo de Software, Spain
- NATO
- SanMiguel Enterprises - Phillipines
- Pixcom Inc, Canada
- US District Court, GA, USA
- Sandor Palace Budapest

GeoDesy FSO

PRODUCTS

Product Structure



Point-to-Point

New Products with
Limited Lifetime Warranty

hz Radio Solution

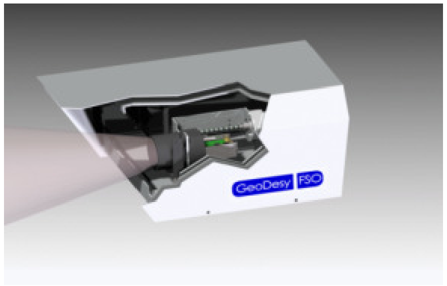
Giga Ethernet

Auto Focus

Fast Ethernet

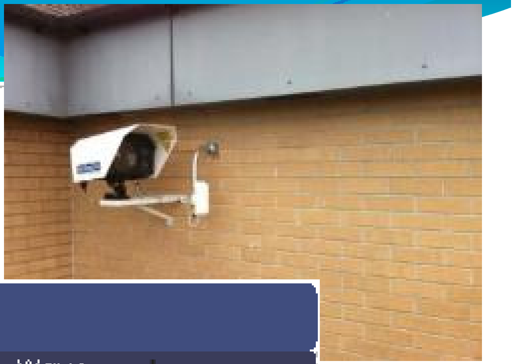
Geo 20 Wireless

FSO Products



GeoDesy FSO

Products



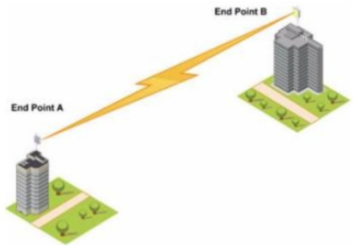
Product summary

Part No.	Protocol	Band-width	Distance	Interface	Wave-length	TX power
PX-P0500E100/AF	Ethernet	100Mbps	20m-100m	UTP(802.3af)	785nm	1x35mW
PX-P1000E100/AF	Ethernet	100Mbps	500-1300m	UTP(802.3af)	785nm	1x35mW
PX-P0500E1000/AF	Giga Ethernet	1250Mbps	20m-600m	UTP/FO (802.3af)	785nm	1x35mW
PX-P0400E1000	Giga Ethernet	1250Mbps	20m-500m	UTP(802.3af)	785nm	1x25mW
PX-P0650E1000	Giga Ethernet	1250Mbps	400m-650m	UTP/FO (802.3af)	785nm	2x25mW
PX-P1400E1000	Giga Ethernet	1250Mbps	500m-1800m	UTP/FO (802.3af)	785nm	4x35mW
PX-P3500E1000	Giga Ethernet	1250Mbps	1400m-3500m	UTP/FO (802.3af)	785nm	8x35mW
PX-P0100E100	Ethernet	100Mbps	20m-100m	UTP(802.3af)	785nm	1x35mW
PX-P0350E100	Ethernet	100Mbps	20m-350m	UTP(802.3af)	785nm	1x35mW
PX-P0650E100	Ethernet	100Mbps	300m-650m	UTP(802.3af)	785nm	1x35mW
PX-P1800E100	Ethernet	100Mbps	560m-1800m	UTP(802.3af)	785nm	2x35mW
PX-P3000E100	Ethernet	100Mbps	1800m-3000m	UTP(802.3af)	785nm	4x35mW
PX-P5000E100	Ethernet	100Mbps	3000-5000m	UTP(802.3af)	785nm	8x35mW

Geo20 5Ghz Mimo

New Products with Limited Lifetime Warranty

5,4Ghz Radio Solution



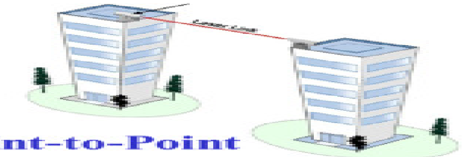
The GEO20 delivers the highest performance and stability available in the 5 GHz CPE class. This product combines a robust IP-66 compliant enclosure with a highly advanced 802.11n radio core containing MIMO 2x2 technology along with an integrated high gain dual polarization directional antenna. The device is powered by a reliable, advanced, and feature-rich operating system, allowing the creation of very high throughput and stable wireless networks quickly, safely, and effectively.

In addition, the GEO20 supports access point operating mode which extends application scenarios and makes the GEO20 suited for both point to point and point to multipoint networks. The robust software engine allows the GEO20 to work as bridge or as a router, provides a user-friendly Adobe Flex - based GUI with instant changes, includes useful installation tools (Site survey, Antenna alignment, Delayed reboot, Spectrum analyzer, ping, traceroute) and also is compatible with Wireless Network Management System for one of the most advanced management tools on the market.

Geo20 5Ghz Mimo

New Products with
Limited Lifetime Warranty

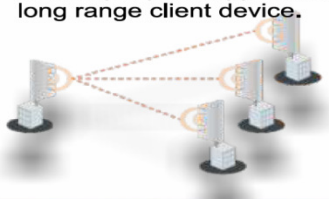
5,4Ghz Radio Solution

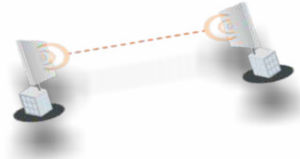


Usage examples

PTMP Wireless GEO20 is an ideal device for point-to-multiple point applications as a medium to long range client device.

PTP GEO20 is a great device for medium to long range point-to-point applications.





Product Distance Recommendation	PTMP Mode	PTP Mode	PTP Mode (Full Capacity)
Geo 20	7 km/ 4.35 mi	20 km/ 12.43 mi	2 km/ 1.24 mi

WLAN standard	IEEE 802.11 a/n
Radio Mode	MIMO 2x2
Operating modes	Access point (auto WDS), Station, Station WDS, iPoll Access Point, iPoll Station
Radio frequency band	5 GHz
Transmit power	Up to 29 dBm (country dependent)
Receive sensitivity	Varying between -95 and -75 dBm depending on modulation
Channel size	20 - 40 MHz
Modulation schemes	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Data rates	802.11 n: 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps
Error correction	FEC, Selective ARQ, STBC
Duplexing scheme	Time division duplex

Antenna

Type	Integrated directional dual-polarized panel
Gain	18 dBi

Wired

Interface	10/100 Base-T, RJ45
Built-in surge protection	Yes

Networking

Operating modes	Bridge, Router
WAN	Static IP, DHCP client, PPPoE client
NAT	Routing w/ or w/o NAT
Static routing	Supported
DHCP	Client, Server, Relay
Port forwarding	Supported
VLAN	Supported for management and data

New Features

LCD display

- Fine alignment Made Simple
- Information on the system status

Manual Beam Focusing

NEW!

- Site adjustable

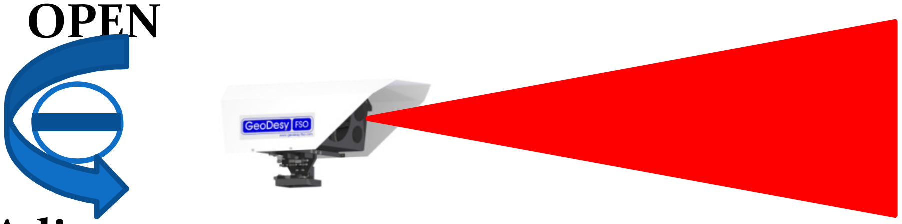
New IP67 box design

New Bracket Design

- Fine Adjustment

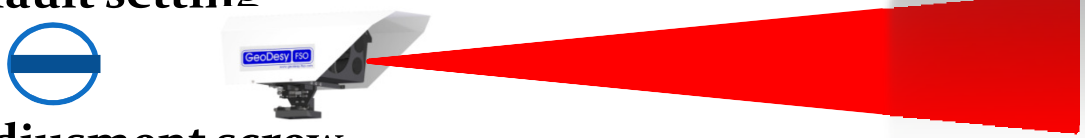
Manual Focus

OPEN



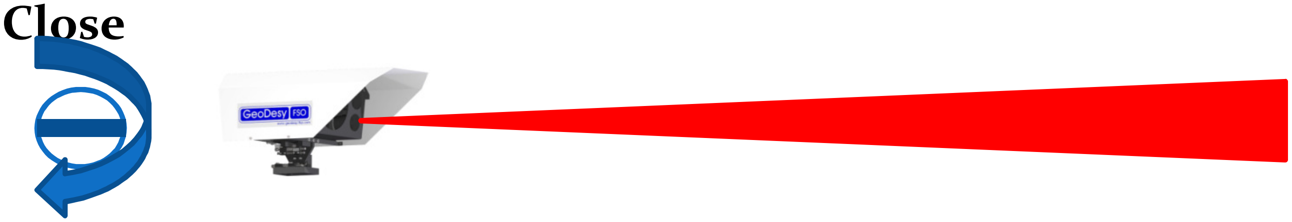
Adjusment screw

Default setting

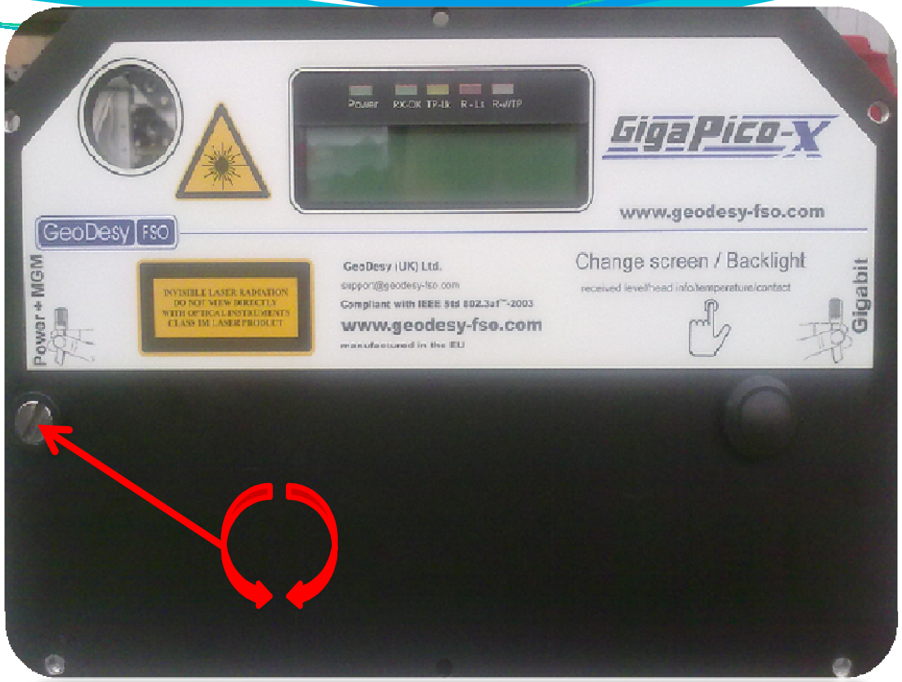


Adjusment screw

Close



Adjusment screw


Power
RX-OK
TP-lk
R-Lt
R-W/TP
GigaPico-X
www.geodesy-fso.com
GeoDesy FSO
Power + MGM
INVISIBLE LASER RADIATION DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 1M LASER PRODUCT
GeoDesy (UK) Ltd.
Compliant with IEEE Std 802.3
www.geodesy-fso.com
manufactured in the EU
Change screen / Backlight
Gigabit

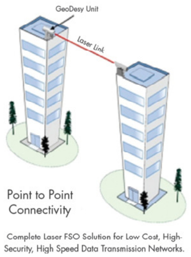
GeoDesy FSO Laser Link

- Quick link setup
- License-free operation
- High transmission security
- Low snow and rain impact
- Full duplex transmission
- Protocol transparency
- No interference
- Great EMI behavior
- In some devices, the beam can be visible, facilitating aiming and detection of failures

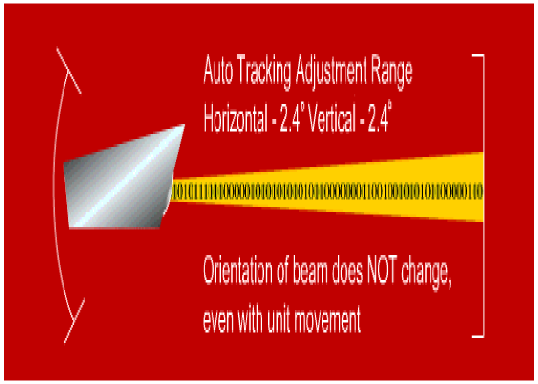
Auto Tracking.

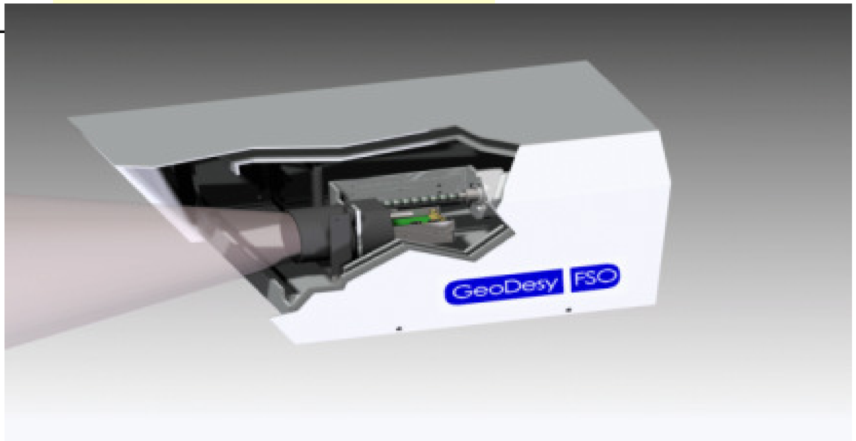
AUTO TRACKING

- Auto Tracking
- Provides Point-to-point Communication @ 1Gb Full Duplex
- Ethernet connectivity from 20m to 2400m
- Dynamic beam tracking system
- Automatic focusing adjustment
- High resolution movement compensation
- Built in signal monitoring
- Auto search function
- High efficiency optics
- 2 year manufacturers warranty

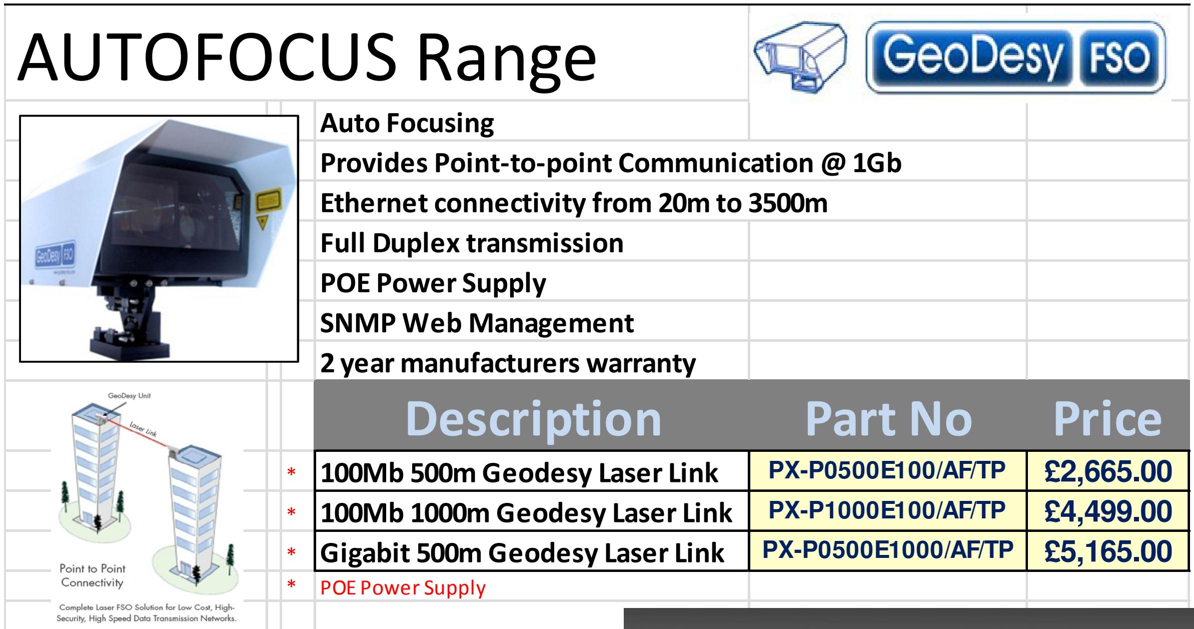

GeoDesy Unit
Laser Link
Point to Point Connectivity
Complete Laser FSO Solution for Low Cost, High-Security, High Speed Data Transmission Networks.

Description	Part No	Price
Gigabit 2400m Auto Tracking Link	AT-P2400E1000TP	£9,999.00


Auto Tracking Adjustment Range
Horizontal - 2.4° Vertical - 2.4°
Orientation of beam does NOT change, even with unit movement



Auto Focus Range.

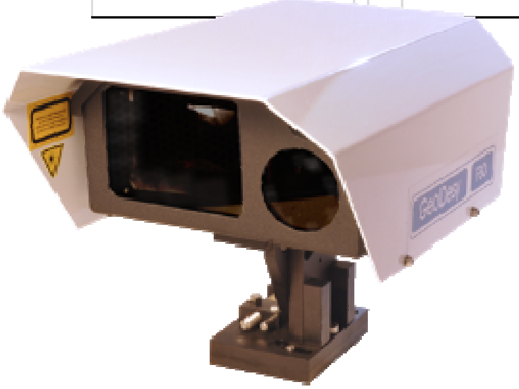


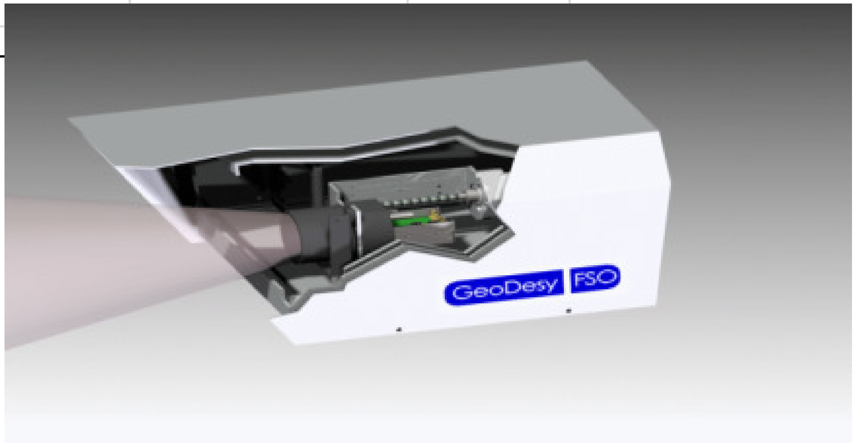
AUTOFOCUS Range

- Auto Focusing
- Provides Point-to-point Communication @ 1Gb
- Ethernet connectivity from 20m to 3500m
- Full Duplex transmission
- POE Power Supply
- SNMP Web Management
- 2 year manufacturers warranty

	Description	Part No	Price
*	100Mb 500m Geodesy Laser Link	PX-P0500E100/AF/TP	£2,665.00
*	100Mb 1000m Geodesy Laser Link	PX-P1000E100/AF/TP	£4,499.00
*	Gigabit 500m Geodesy Laser Link	PX-P0500E1000/AF/TP	£5,165.00
*	POE Power Supply		

Complete Laser FSO Solution for Low Cost, High-Security, High Speed Data Transmission Networks.

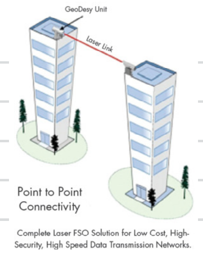




The GigaBit Product Range.

GIGABIT Range

- Provides Point-to-point Communication @ 1Gb
- Ethernet connectivity from 20m to 3500m
- Full Duplex transmission
- POE Power Supply
- SNMP Web Management
- 2 year manufacturers warranty


GeoDesy Unit
Laser Link
Point to Point Connectivity
Complete Laser FSO Solution for Low Cost, High-Security, High Speed Data Transmission Networks.

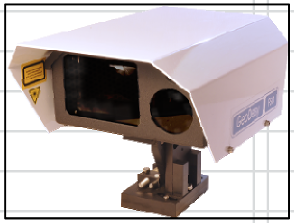
	Description	Part No	Price
*	Gigabit 400m Geodesy Laser Link	PX-P0400E1000TP	£4,349.00
*	Gigabit 600m Geodesy Laser Link	PX-P0600E1000TP	£7,495.00
*	Gigabit 1000m Geodesy Laser Link	PX-P01000E1000TP	£9,690.00
*	Gigabit 1400m Geodesy Laser Link	PX-P01400E1000TP	£10,570.00
**	Gigabit 3500m Geodesy Laser Link	PX-P3500E1000TP	£16,650.00

* POE Power Supply

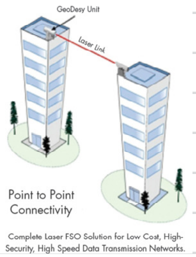
** Install Distance is required for production

Fast Ethernet Product Range

100MB Range



Provides Point-to-point Communication @ 100Mb
Ethernet connectivity from 20m to 5000m
Full Duplex transmission
POE Power Supply
SNMP Web Management
2 year manufacturers warranty

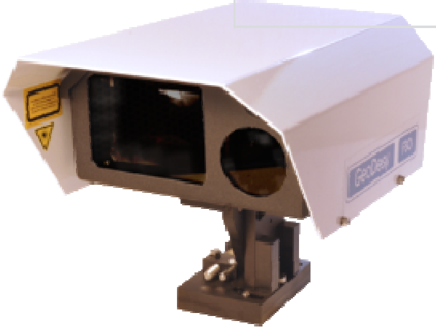


Complete Laser FSO Solution for Low Cost, High-Security, High Speed Data Transmission Networks.

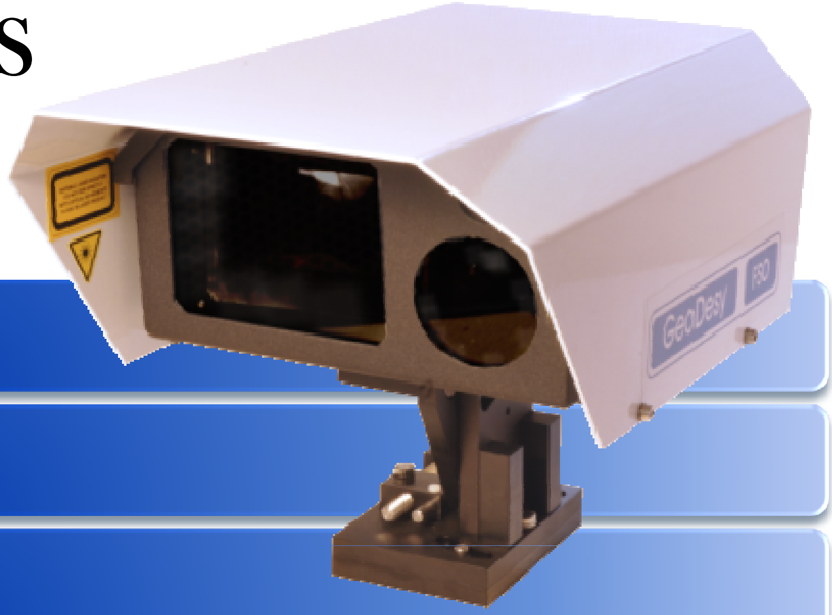
	Description	Part No	Price
*	100Mb 100m Geodesy Laser Link	PX-P0100E100TP	£1,395.00
*	100Mb 200m Geodesy Laser Link	PX-P0200E100TP	£1,795.00
*	100Mb 350m Geodesy Laser Link	PX-P0350E100TP	£1,795.00
*	100Mb 650m Geodesy Laser Link	PX-P0650E100TP	£3,380.00
*	100Mb 1800m Geodesy Laser Link	PX-P1800E100TP	£5,495.00
**	100Mb 3000m Geodesy Laser Link	PX-P3000E100TP	£8,250.00
**	100Mb 5000m Geodesy Laser Link	GD-5000E100TP	£12,850.00

* POE Power Supply

** Install Distance is required for production



Next Range Features



- Maximum Installation distance 1800m
- Up to 1Gbps Ethernet speed POE
- Easy installation
- RRLM (Remote received level monitoring)
- XT, LT versions for maximum reliability
- In-Band HTTP and SNMP monitoring system
- Eye Safe laser emission(1M)
- Compact design

Electrical Characteristics

Light Source : GaAlAs Laser Diode

Transmit Power : 10-50 mW

Detector : Si PIN/ SI APD photodiode

Dynamic range : > 40 dB

Data in/out : 62.5/125 MM fiber at 850 or 1300 nm with ST IF

Power : 110 / 230 VAC, 50W max.

Power to head : 2 x 15 VAC, 1.5 A

System Latency : under 50 ns

Optical Characteristic

Wavelength : 785 nm

Divergence : 0.5 - 10 mrad

Acceptance Angle : 10.5 mrad

Environment

Operating Temperature : -65 to +60 °C

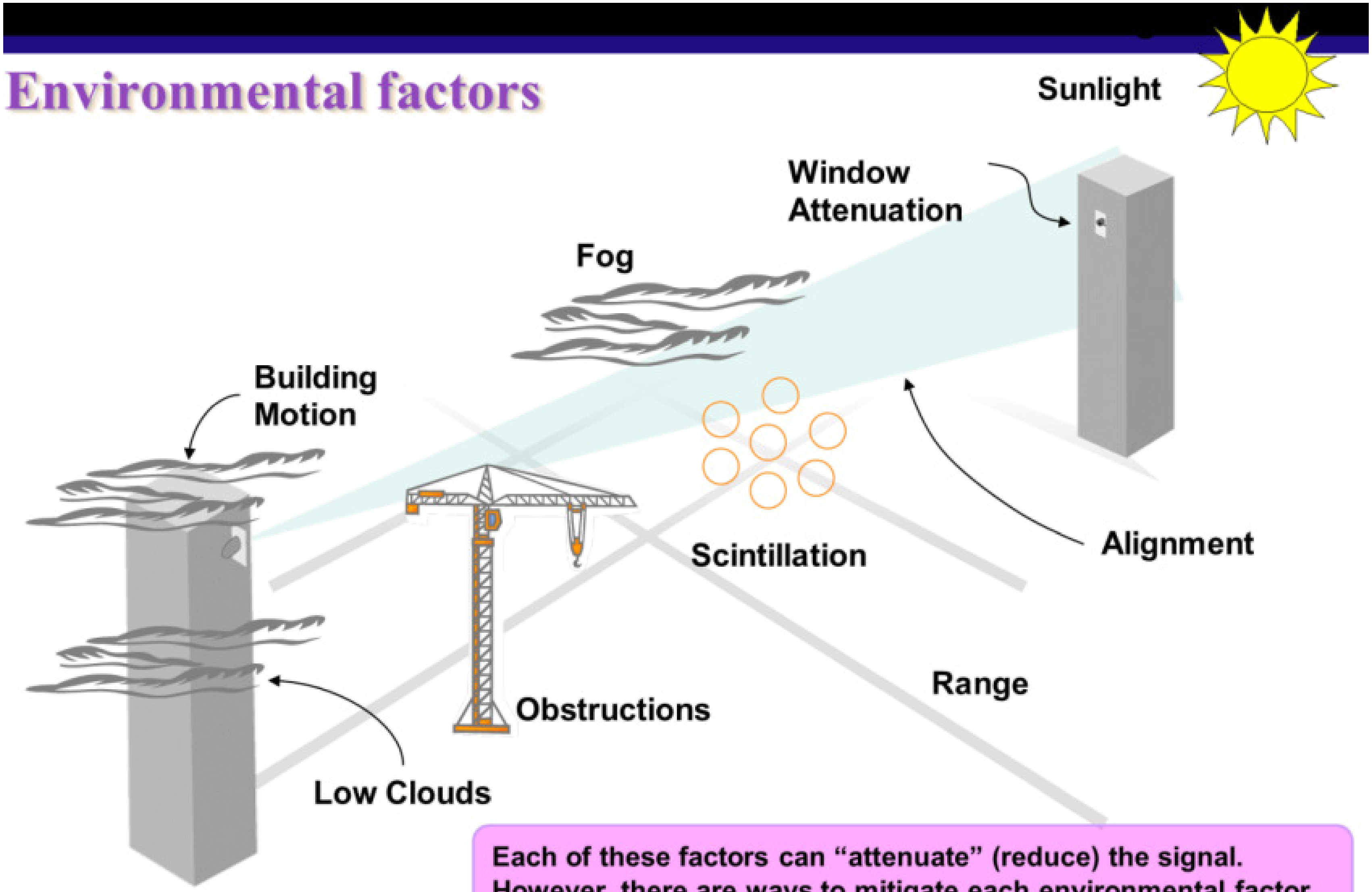
Storage Temperature : -65 to +80 °C

Humidity : 95% non condensed

Protection rating : IP 65 (head assembly and outdoor unit)

Environment

Environmental factors

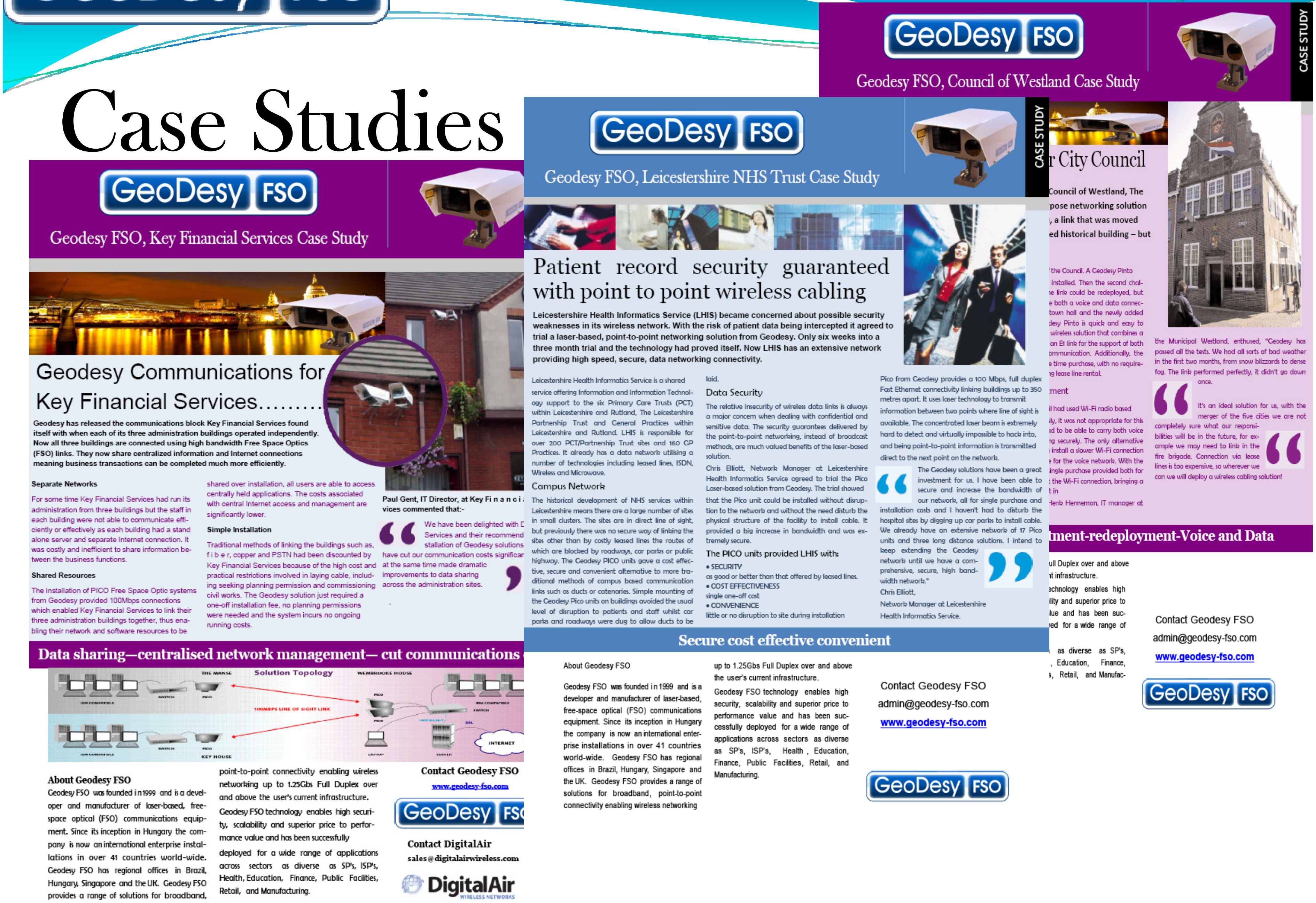


Each of these factors can "attenuate" (reduce) the signal. However, there are ways to mitigate each environmental factor.

Typical Installs

GeoDesy FSO

Case Studies



GeoDesy FSO

Geodesy FSO, Key Financial Services Case Study

Geodesy Communications for Key Financial Services.........

Geodesy has released the communications block Key Financial Services found itself with when each of its three administration buildings operated independently. Now all three buildings are connected using high bandwidth Free Space Optics (FSO) links. They now share centralized information and Internet connections meaning business transactions can be completed much more efficiently.

Separate Networks

For some time Key Financial Services had run its administration from three buildings but the staff in each building were not able to communicate efficiently or effectively as each building had a stand alone server and separate Internet connection. It was costly and inefficient to share information between the business functions.

Shared Resources

The installation of PICO Free Space Optic systems from Geodesy provided 100Mbps connections which enabled Key Financial Services to link their three administration buildings together, thus enabling their network and software resources to be shared over installation, all users are able to access centrally held applications. The costs associated with central Internet access and management are significantly lower.

Simple Installation

Traditional methods of linking the buildings such as, fiber, copper and PSTN had been discounted by Key Financial Services because of the high cost and practical restrictions involved in laying cable, including seeking planning permission and commissioning civil works. The Geodesy solution just required a one-off installation fee, no planning permissions were needed and the system incurs no ongoing running costs.

Paul Gent, IT Director, at Key Financia vices commented that:-

We have been delighted with D
Services and their recommend
stallation of Geodesy solutions
have cut our communication costs significar
at the same time made dramatic
improvements to data sharing
across the administration sites.

Data sharing—centralised network management— cut communications

About Geodesy FSO

Geodesy FSO was founded in 1999 and is a developer and manufacturer of laser-based, free-space optical (FSO) communications equipment. Since its inception in Hungary the company is now an international enterprise installations in over 41 countries world-wide. Geodesy FSO has regional offices in Brazil, Hungary, Singapore and the UK. Geodesy FSO provides a range of solutions for broadband, point-to-point connectivity enabling wireless networking up to 1.25Gbs Full Duplex over and above the user's current infrastructure.

Geodesy FSO technology enables high security, scalability and superior price to performance value and has been successfully deployed for a wide range of applications across sectors as diverse as SP's, ISP's, Health, Education, Finance, Public Facilities, Retail, and Manufacturing.

Contact Geodesy FSO

www.geodesy-fso.com

GeoDesy FS

Contact DigitalAir

sales@digitalairwireless.com

DigitalAir
WIRELESS NETWORKS

GeoDesy FSO

Geodesy FSO, Leicestershire NHS Trust Case Study

CASE STUDY

Patient record security guaranteed with point to point wireless cabling

Leicestershire Health Informatics Service (LHIS) became concerned about possible security weaknesses in its wireless network. With the risk of patient data being intercepted it agreed to trial a laser-based, point-to-point networking solution from Geodesy. Only six weeks into a three month trial and the technology had proved itself. Now LHIS has an extensive network providing high speed, secure, data networking connectivity.

Leicestershire Health Informatics Service is a shared service offering Information and Information Technology support to the six Primary Care Trusts (PCT) within Leicestershire and Rutland, The Leicestershire Partnership Trust and General Practices within Leicestershire and Rutland. LHIS is responsible for over 200 PCT/Partnership Trust sites and 160 GP Practices. It already has a data network utilising a number of technologies including leased lines, ISDN, Wireless and Microwave.

Campus Network

The historical development of NHS services within Leicestershire means there are a large number of sites in small clusters. The sites are in direct line of sight, but previously there was no secure way of linking the sites other than by costly leased lines the routes of which are blocked by roadways, car parks or public highway. The Geodesy PICO units gave a cost effective, secure and convenient alternative to more traditional methods of campus based communication links such as ducts or catenaries. Simple mounting of the Geodesy Pico units on buildings avoided the usual level of disruption to patients and staff whilst car parks and roadways were dug to allow ducts to be laid.

Data Security

The relative insecurity of wireless data links is always a major concern when dealing with confidential and sensitive data. The security guarantees delivered by the point-to-point networking, instead of broadcast methods, are much valued benefits of the laser-based solution.

Chris Elliott, Network Manager at Leicestershire Health Informatics Service agreed to trial the Pico Laser-based solution from Geodesy. The trial showed that the Pico unit could be installed without disruption to the network and without the need disturb the physical structure of the facility to install cable. It provided a big increase in bandwidth and was extremely secure.

The PICO units provided LHIS with:

- SECURITY
as good or better than that offered by leased lines.
- COST EFFECTIVENESS
single one-off cost
- CONVENIENCE
little or no disruption to site during installation

Pico from Geodesy provides a 100 Mbps, full duplex Fast Ethernet connectivity linking buildings up to 350 metres apart. It uses laser technology to transmit information between two points where line of sight is available. The concentrated laser beam is extremely hard to detect and virtually impossible to hack into, and being point-to-point information is transmitted direct to the next point on the network.

The Geodesy solutions have been a great investment for us. I have been able to secure and increase the bandwidth of our network, all for single purchase and installation costs and I haven't had to disturb the hospital sites by digging up car parks to install cable. We already have an extensive network of 17 Pico units and three long distance solutions. I intend to keep extending the Geodesy network until we have a comprehensive, secure, high bandwidth network."

Chris Elliott,

Network Manager at Leicestershire

Health Informatics Service.

Secure cost effective convenient

About Geodesy FSO

Geodesy FSO was founded in 1999 and is a developer and manufacturer of laser-based, free-space optical (FSO) communications equipment. Since its inception in Hungary the company is now an international enterprise installations in over 41 countries world-wide. Geodesy FSO has regional offices in Brazil, Hungary, Singapore and the UK. Geodesy FSO provides a range of solutions for broadband, point-to-point connectivity enabling wireless networking up to 1.25Gbs Full Duplex over and above the user's current infrastructure.

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Contact Geodesy FSO

admin@geodesy-fso.com

www.geodesy-fso.com

GeoDesy FSO

GeoDesy FSO

Geodesy FSO, Council of Westland Case Study

CASE STUDY

r City Council

Council of Westland, The
pose networking solution
, a link that was moved
ed historical building – but

the Council. A Geodesy Pinto
installed. Then the second chal-
e link could be redeployed, but
e both a voice and data connec-
town hall and the newly added
desy Pinto is quick and easy to
wireless solution that combines a
an E1 link for the support of both
ommunication. Additionally, the
e time purchase, with no require-
g lease line rental.

ment

l had used Wi-Fi radio based
ly, it was not appropriate for this
d to be able to carry both voice
g securely. The only alternative
install a slower Wi-Fi connection
e for the voice network. With the
ingle purchase provided both for
the Wi-Fi connection, bringing a
t in

Henk Henneman, IT manager at the Municipal Westland, enthused, "Geodesy has passed all the tests. We had all sorts of bad weather in the first two months, from snow blizzards to dense fog. The link performed perfectly, it didn't go down once.

It's an ideal solution for us, with the merger of the five cities we are not completely sure what our responsibilities will be in the future, for example we may need to link in the fire brigade. Connection via lease lines is too expensive, so wherever we can we will deploy a wireless cabling solution!

tment-redeployment-Voice and Data

ull Duplex over and above
t infrastructure.
echnology enables high
lity and superior price to
lue and has been suc-
ed for a wide range of

as diverse as SP's,
, Education, Finance,
s, Retail, and Manufac-

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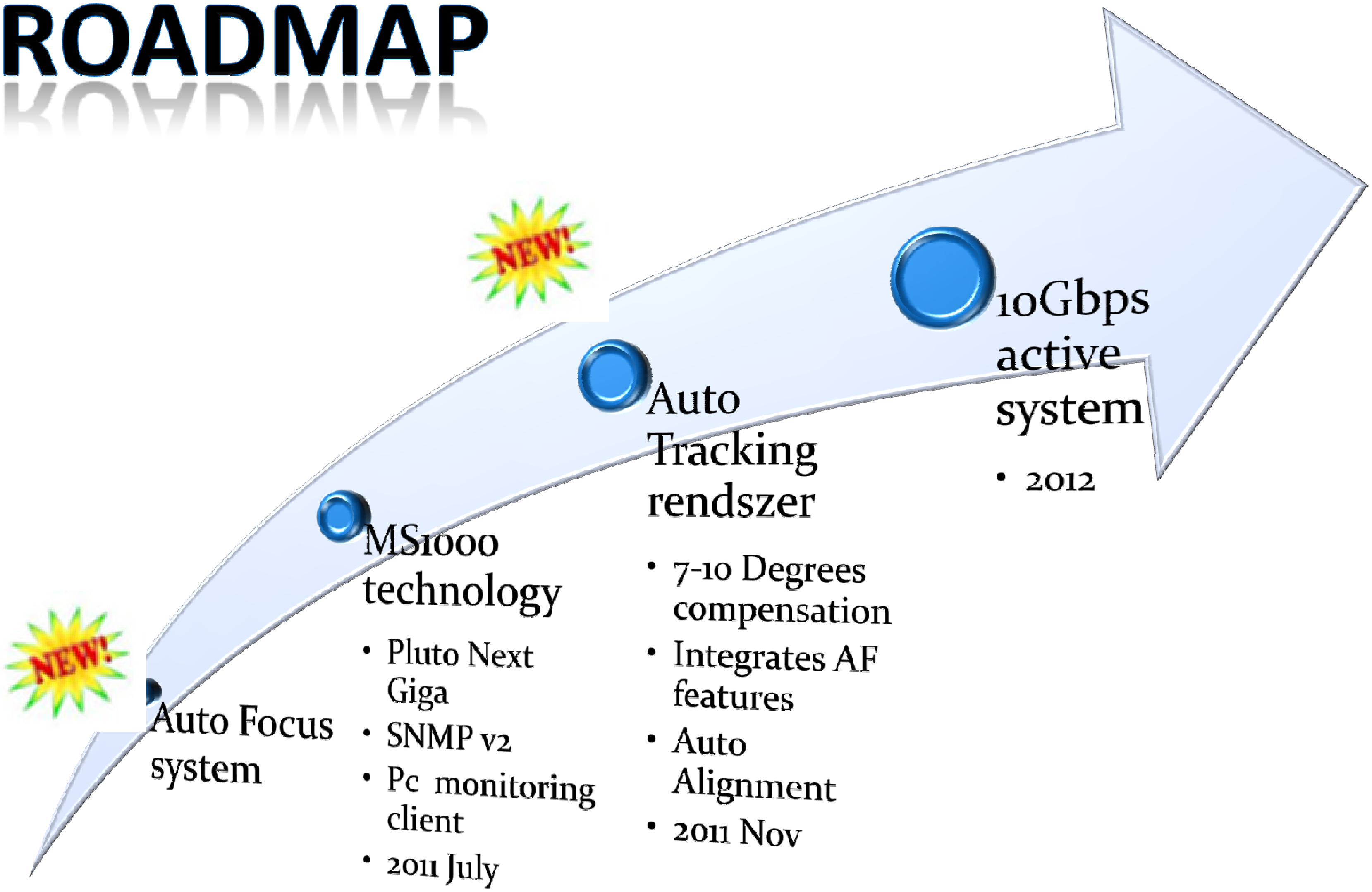
GeoDesy FSO

ROADMAP



Auto Focus system

MS1000 technology

- Pluto Next Giga
- SNMP v2
- Pc monitoring client
- 2011 July

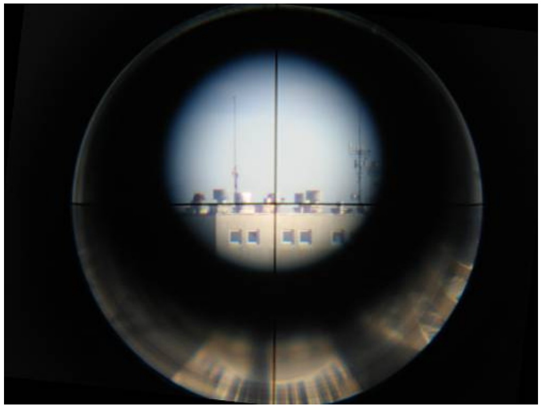
Auto Tracking rendszer

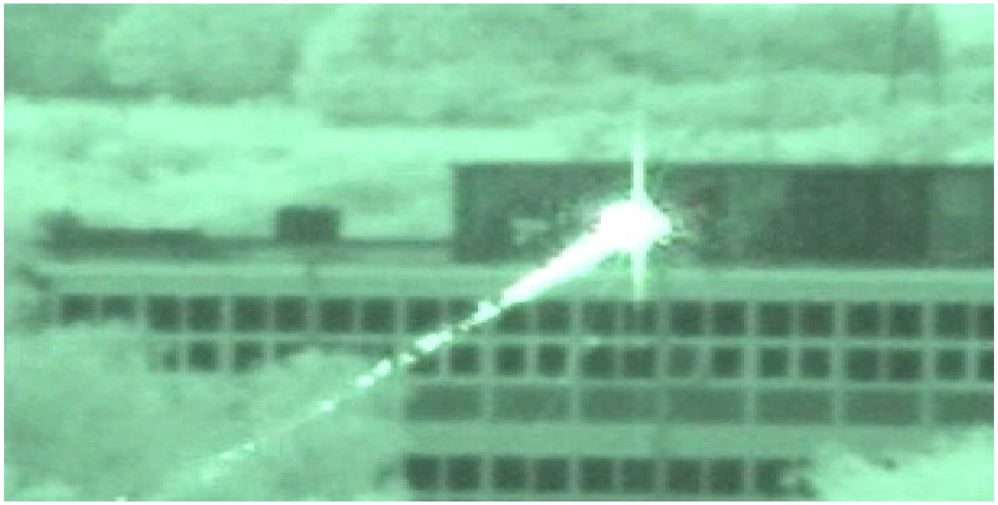
- 7-10 Degrees compensation
- Integrates AF features
- Auto Alignment
- 2011 Nov

10Gbps active system

- 2012

Q&A





EQUINOX
TELECOM

Full Spectrum Global Wireless Distributor

Authorized Distributor – USA & Latin Am
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Twitter: equinoxUSA